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Progress towards measurement of the slow wave in the WVU Helicon Plasma Source ROBERT HARDIN, EARL SCIME, MIKE SPENCER, West Virginia University — We report the updated status of the 300 GHz collective scattering system on the Hot hELIcon eXperiment (HELIX) at WVU. Vacuum chamber extensions for the injection beam and scattered beam collection apparatus have been installed on HELIX and optical component alignment was accomplished using a simple laser pointer. System calibration, before installation, was done using an acoustic cell scattering technique. The acoustic cell, using a 1 MHz piezoelectric transducer on HDPE and Teflon, is used to create scattered waves with angles of 39° and 60°, corresponding to scattered wave vectors of 42 1/cm and 63 1/cm respectively. With the limitation of measurable wave vectors, due to chamber geometry, ranging from approximately 53 to 89 1/cm, only the Teflon acoustic cell could be used for the full system calibration.

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